

Claims:

1. A method for time stamping a document comprising:
 - receiving a time stamp receipt at an outside agency, said time stamp receipt including identifying data associated with said document and a time indication;
 - computing the age of said time stamp receipt based on said time indication;
 - creating an aged time stamp receipt at said outside agency by combining said identifying data, said time indication and said computed age; and
 - binding at said outside agency said identifying data, said time indication, and a digital representation of said age using a cryptographic binding scheme to create an aged time stamp receipt.
2. The time stamping method of claim 1 further including transmitting said aged time stamp receipt and binding information generated during said binding operation to a designated party.
3. The time stamping method of claim 1 wherein said identifying data comprises a digital representation of at least a portion of said document.

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4. The time stamping method of claim 3 wherein said identifying data comprises a digital sequence derived by application of a deterministic function to at least a portion of said document.
 5. The time stamping method of claim 4 wherein said digital sequence is a hash value derived by application of a one-way hashing function to at least a portion of said document.
 6. The time stamping method of claim 1 wherein said time stamp receipt further includes an identification number associated with the document originator.
 7. The time stamping method of claim 6 wherein said time stamp receipt further includes a sequential record number.
 8. The time stamping method of claim 7 further including the step of validating said time stamp receipt at said outside agency.
 9. The time stamping method of claim 8 wherein the step of validating said time stamp receipt includes comparing said identification number and sequential record number with data maintained by the outside agency.
 10. The time stamping method of claim 1 wherein said binding step includes signing a combination of said identifying data, said time indication, and said

digital representation of said age using a digital cryptographic signature scheme.

11. The time stamping method of claim 1 wherein said binding step includes computing a message authentication code on a combination of said identifying data, said time indication, and said digital representation of said age using a secret key controlled by said outside agency.
12. The time stamping method of claim 1 wherein said binding step includes computing a hash value on a combination of said identifying data, said time indication, and said digital representation of said age.
13. The time stamping method of claim 1 wherein said binding step includes encrypting a combination of said identifying data, said time indication, and said digital representation of said age using a secret key controlled by said outside agency.
14. A method for time stamping a document comprising:
 - creating a time stamp receipt including identifying data associated with said document and a time indication;
 - transmitting said time stamp receipt to an outside agency for certification;
 - computing the age of said time stamp receipt at said outside agency;

creating an aged time stamp receipt at said outside agency by combining
said identifying data, said time indication and said computed age; and
binding at said outside agency said identifying data, said time indication,
and a digital representation of said age using a cryptographic binding
scheme to create an aged time stamp receipt.

15. The time stamping method of claim 14 further including transmitting said aged
time stamp receipt and binding information generated during said binding
operation to a designated party.

16. The time stamping method of claim 14 wherein said identifying data
comprises a digital representation of at least a portion of said document.

17. The time stamping method of claim 16 wherein said identifying data
comprises a digital sequence derived by application of a deterministic function
to at least a portion of said document.

18. The time stamping method of claim 17 wherein said digital sequence is a
hash value derived by application of a one-way hashing function to at least a
portion of said document.

19. The time stamping method of claim 14 wherein said time stamp receipt further
includes an identification number associated with the document originator.

20. The time stamping method of claim 19 wherein said time stamp receipt further includes a sequential record number.

21. The time stamping method of claim 20 further including the step of validating said time stamp receipt at said outside agency.

22. The time stamping method of claim 21 wherein the step of validating said time stamp receipt includes comparing said identification number and sequential record number with data maintained by the outside agency.

23. The time stamping method of claim 14 wherein said binding step includes signing a combination of said identifying data, said time indication, and said digital representation of said age using a digital cryptographic signature scheme.

24. The time stamping method of claim 14 wherein said binding step includes computing a message authentication code on a combination of said identifying data, said time indication, and said digital representation of said age using a secret key controlled by said outside agency.

25. The time stamping method of claim 14 wherein said binding step includes computing a hash value on a combination of said identifying data, said time indication, and said digital representation of said age.

26. The time stamping method of claim 14 wherein said binding step includes encrypting a combination of said identifying data, said time indication, and said digital representation of said age using a secret key controlled by said outside agency.

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